**FIG. 8**

(i)

Cbz—NH

21

HN—R

22 → 400
23 → 500
24 → 600
16 → 700
25 → 800
36 → 38
37 → 39
40 → 41
42 → 43
44 → 45
46;47;48 → 49;50;51
52;53;54 → 55;56;57
58;59;60 → 61;62;63
64;65;66 → 67;68;69
100 → 1b
101;102;103 → 104;105;106

HN—R =

22  MeO⌬OMe

23  MeO⌬OMe  MeO⌬OMe

24  MeO

16

25  R=Mc  R=Bn

36 R=Mc
37 R=Bn

40  MeO⌬OMe

42  BnO⌬OBn

44  HO⌬OH

46 R=H; 47 R=Bn, 48 R=Me

52 R=H; 53 R=Bn, 54 R=Me

58 R=H; 59 R=Bn, 60 R=Me (cis)
64 R=H; 65 R= Bn, 66 R=Me (trans)

100

101 R=H; 102 R=Bn, 103 R=Me

# FIG. II

15

(i-ii)
2 steps

85;86;87 ⟶ 98;99;120
88;89;90 ⟶ 121;122;123
91;92;93 ⟶ 124;125;126
94 ⟶ 127
95;96;97 ⟶ 128;129;130

HN—R =

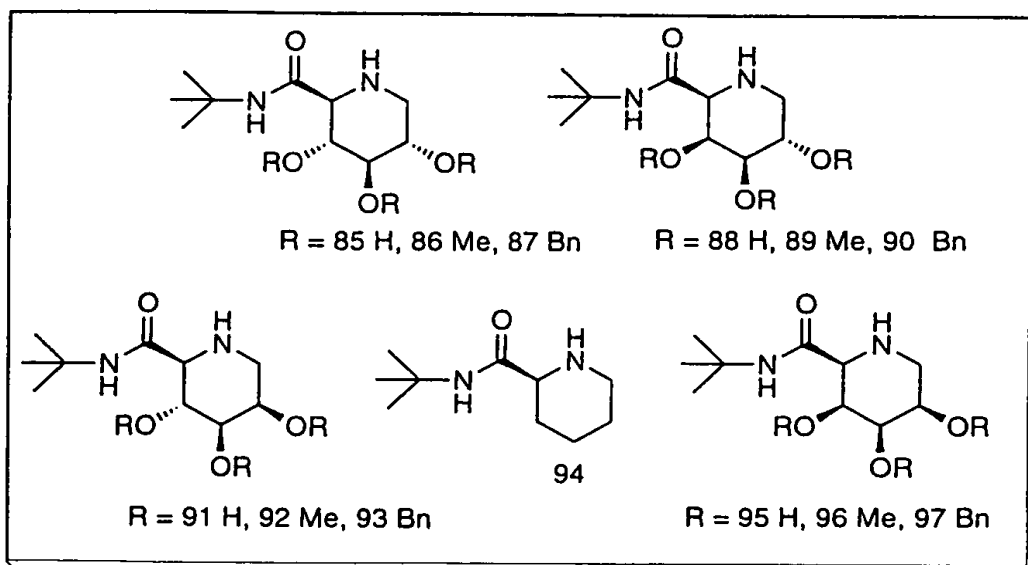R = 85 H, 86 Me, 87 Bn

R = 88 H, 89 Me, 90 Bn

R = 91 H, 92 Me, 93 Bn

94

R = 95 H, 96 Me, 97 Bn

FIG. 13

21

| | |
|---|---|
| 85;86;87 → | 131;132;133 |
| 88;89;90 → | 134;135;136 |
| 91;92;93 → | 137;138;139 |
| 94 → | 140 |
| 95;96;97 → | 141;142;143 |

R = 85 H, 86 Me, 87 Bn

R = 88 H, 89 Me, 90 Bn

R = 91 H, 92 Me, 93 Bn

94

R = 95 H, 96 Me, 97 Bn

FIG. 14

R=CPZ or BOC (for benzyl derivative)

1039

1040

1041

1042

X= Me;
or X=Bn

1043

1044

1045

X=   Me    Bn

86    87

# FIG. 21

**FIG. 22**

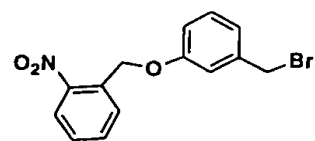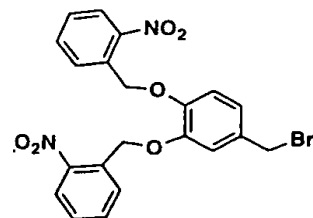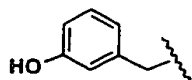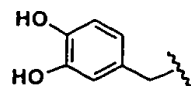R=CPZ or BOC (for benzyl derivative)
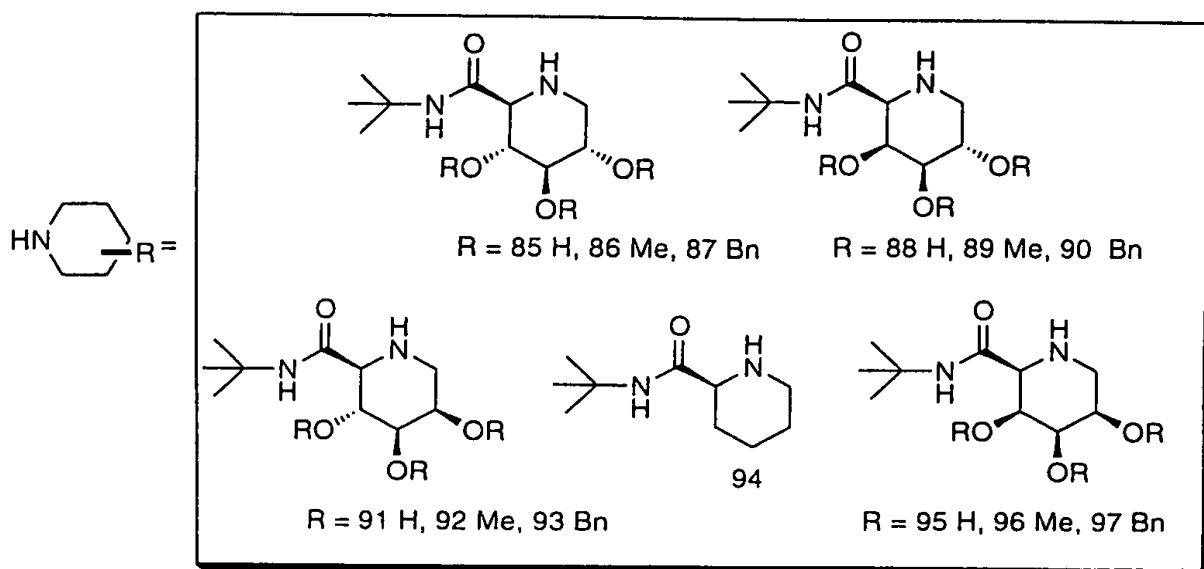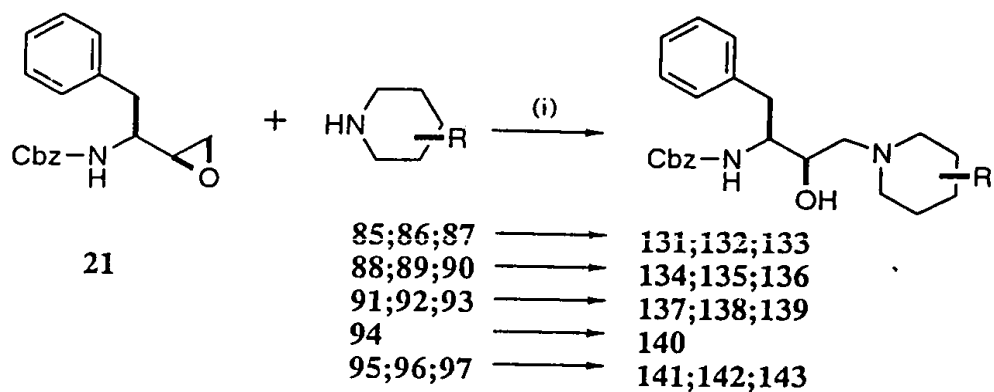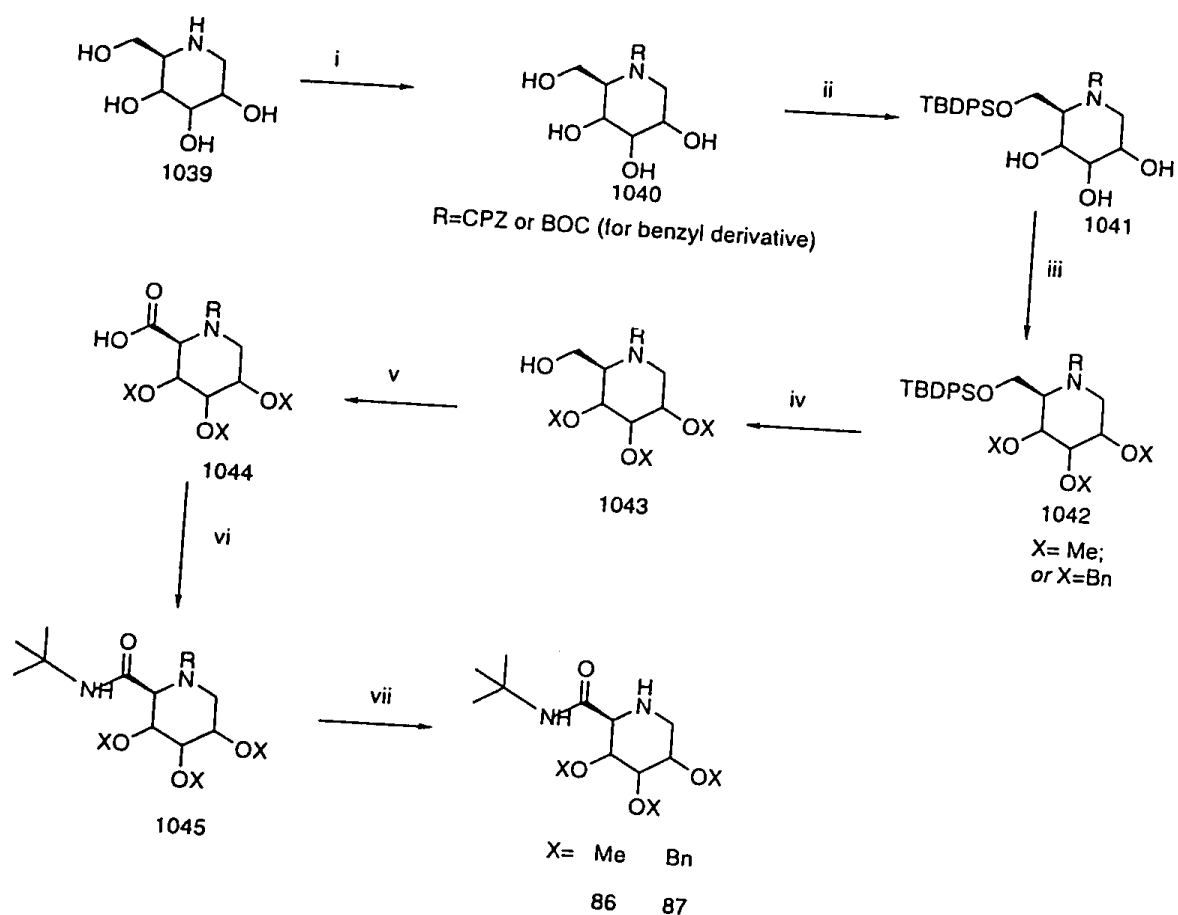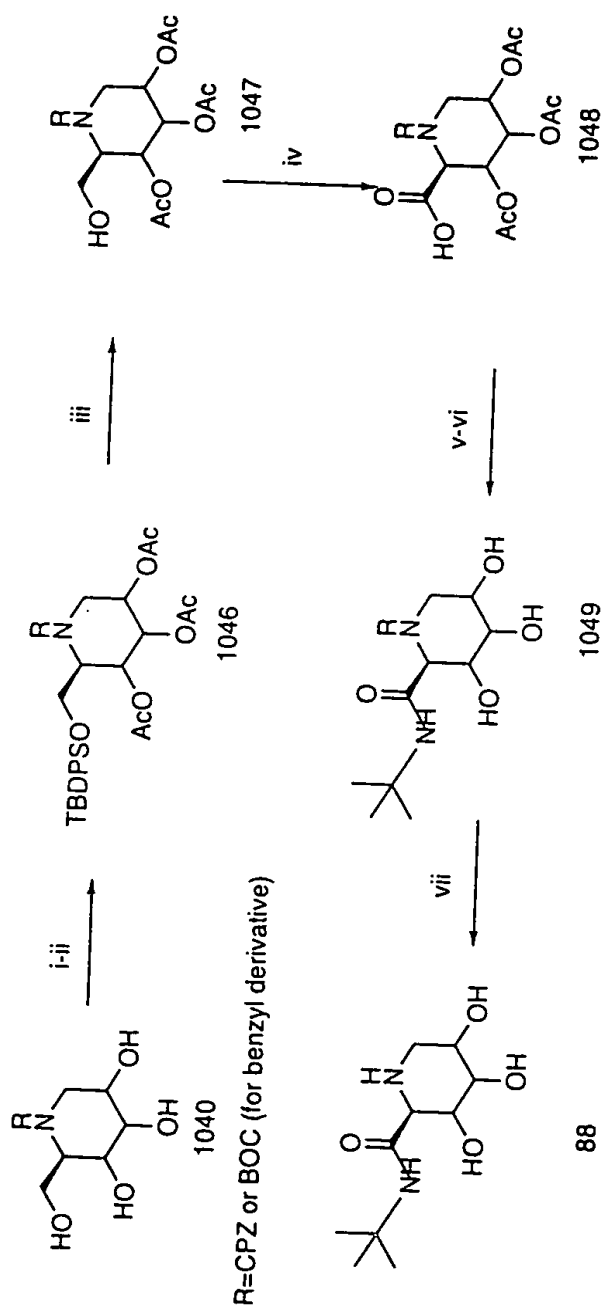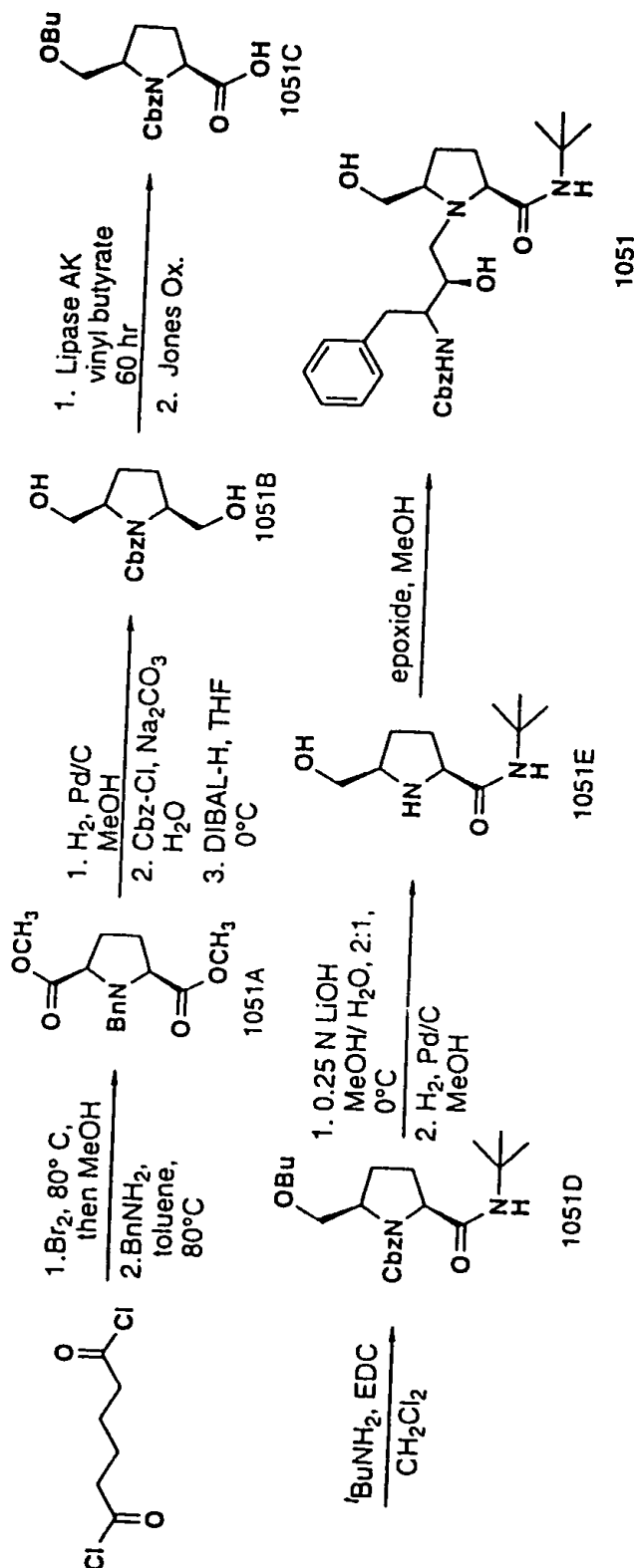
**FIG. 28**
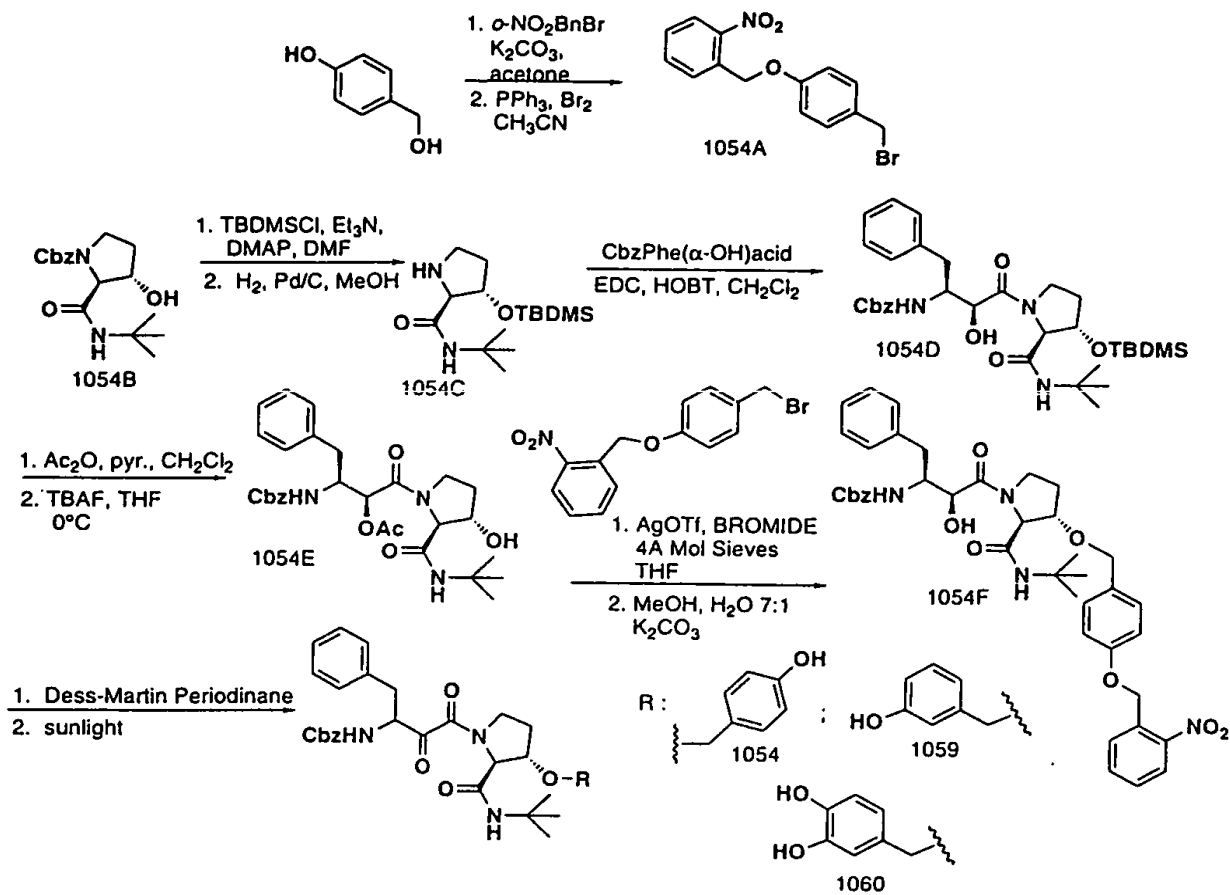
ALTERNATIVES USING THE FOLLOWING BROMIDES:
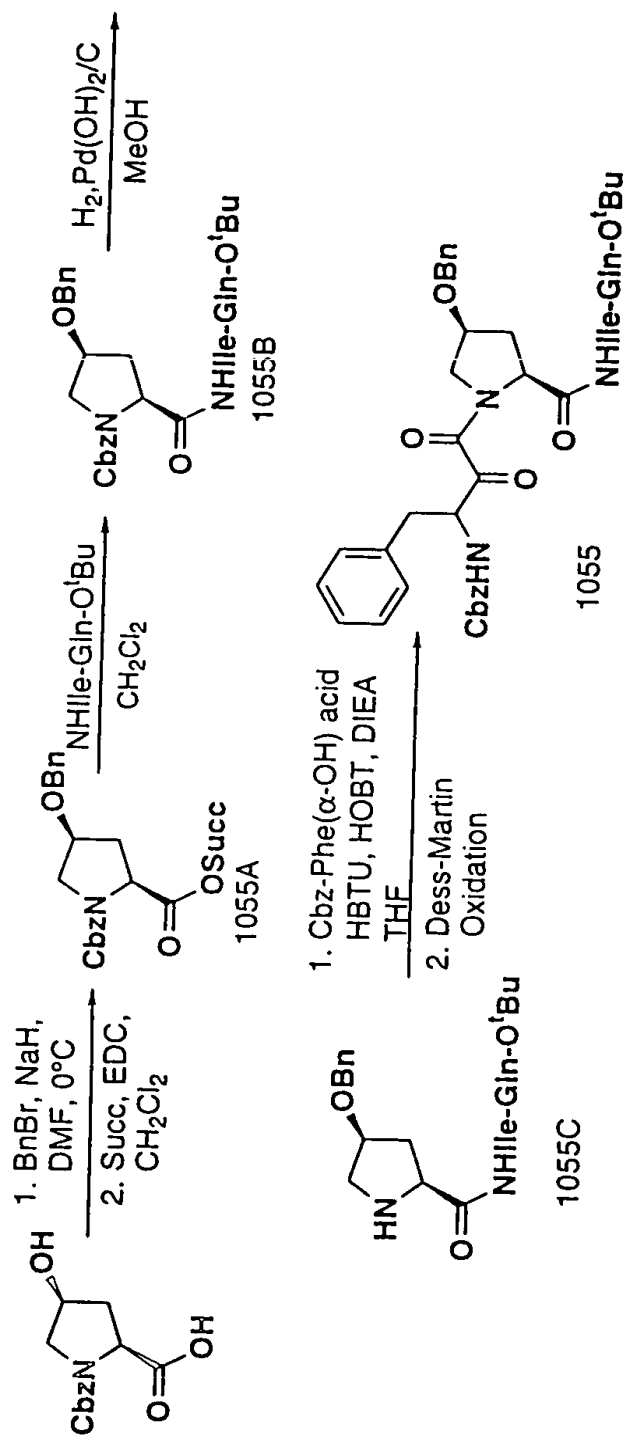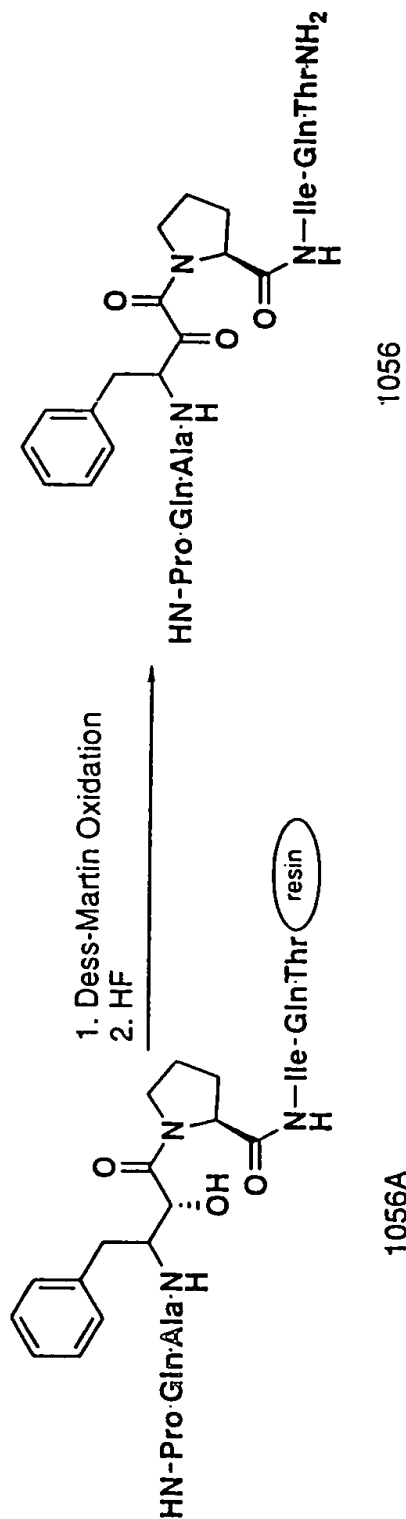
WHEREIN R =

WHEREIN R =

1059

1060

# FIG. 30

**FIG. 3I**

**FIG. 32**